IN THE CLAIMS:

1.   (Currently Amended)   In a G.709 network-connected integrated circuit, a method for generating alarms from forward error correction (FEC) data, the method comprising:

receiving messages including forward error correction bytes;

using the forward error correction bytes to detect errors in the messages; [[and,]]

generating alarm signals in response to the detected errors;

wherein using the forward error correction bytes to detect errors in the messages includes detecting a first number of errors; and,

wherein generating alarm signals in response to the detected errors includes generating a signal degrade (SD) signal in response to the first number of errors.

2.   Canceled

3.   (Currently Amended)   The method of claim [[2]] 1 wherein using the forward error correction bytes to detect errors in the messages includes detecting a second number of errors, greater than the first number; and,

wherein generating alarm signals in response to the detected errors includes generating a signal fail (SF) signal in response to the second number of errors.

4.   (Original)   The method of claim 3 wherein generating an alarm signal in response to the detected errors includes

generating a signal degrade (SD) signal in response to the first number of errors being detected within a first time period.

5. (Original) The method of claim 4 wherein generating alarm signals in response to the detected errors includes generating a signal fail (SF) signal in response to the second number of errors being detected within a second time period.

6. (Original) The method of claim 5 further comprising:

selecting the first number;

selecting the second number;

selecting the first time period; and

selecting the second time period.

7. (Original) The method of claim 6 further comprising:

selecting an error type; and,

wherein generating alarm signals in response to the detected errors includes generating an alarm signal in response to the selected error type.

8. (Original) The method of claim 7 wherein selecting an error type includes selecting a "1s" density alarm; and,

wherein generating alarm signals in response to the detected errors includes generating an alarm in response to the number of 1-bit errors detected.

9.   (Original)   The method of claim 7 wherein selecting an error type includes selecting a "0s" density alarm; and,

wherein generating alarm signals in response to the detected errors includes generating an alarm in response to the number of 0-bit errors detected.

10.   (Original)   The method of claim 7 wherein selecting an error type includes selecting a bytes density alarm; and,

wherein generating alarm signals in response to the detected errors includes generating an alarm in response to the number of byte errors detected.

11.   (Original)   The method of claim 7 wherein selecting an error type includes selecting a sub-row density alarm; and,

wherein generating an alarm signal in response to the detected errors includes generating an alarm in response to the number of sub-row errors detected.

12.   (Currently Amended)   In a G.709 network-connected integrated circuit, a system for generating alarms from forward error correction (FEC) data, the system comprising:

a forward error correction decoder having an input to receive messages including forward error correction bytes, the forward error correction decoder having an output to supply the number of detected errors in the messages; [[and,]]

an alarm circuit having an input to accept the number of detected errors and an output to supply alarm signals in response to the detected errors;

wherein the forward error correction decoder detects a first number of errors; and,

wherein the alarm circuit generates a signal degrade (SD) signal in response to the first number of errors.

13.   Canceled

14.   (Currently Amended)   The system of claim [[13]] 12 wherein the forward error correction decoder detects a second number of errors, greater than the first number; and,

wherein the alarm circuit generates a signal fail (SF) signal in response to the second number of errors.

15.   (Original)   The system of claim 14 wherein the decoder has an output to supply a clock signal derived from the rate at which the messages are received; and,

wherein the alarm circuit has a input to accept the clock signal, and wherein the alarm circuit generates a signal degrade (SD) signal in response to the first number of errors being detected within a first time period of the clock signal.

16.   (Original)   The system of claim 15 wherein the alarm circuit generates a signal fail (SF) signal in response to the second number of errors being detected within a second time period of the clock signal.

17.   (Original)   The system of claim 16 wherein the alarm circuit has an input to select the first number, the second number, the first time period, and the second time period.

18.   (Original)   The system of claim 17 wherein the forward error correction decoder detects a plurality of error types; and,

wherein the alarm circuit has an input for selecting error type, and wherein the alarm circuit generates an alarm signal in response to the selected error type.

19.   (Original)   The system of claim 18 wherein the alarm circuit accepts a 1s density type error selection and generates an alarm in response to the number of 1-bit errors detected.

20.   (Original)   The system of claim 18 wherein the alarm circuit accepts a 0s density error type selection and generates an alarm in response to the number of 0-bit errors detected.

21.   (Original)   The system of claim 18 wherein the alarm circuit accepts a bytes density error type selection and generates an alarm in response to the number of byte errors detected.

22.   (Original)   The system of claim 18 wherein the alarm circuit accepts a sub-row density error type selection and generates an alarm in response to the number of sub-row errors detected.